

In the claims:

1. (currently amended) A syringe pump comprising:

a syringe comprising a plunger that slides in a body which has a discharge port;

a driving mechanism coupled to said syringe, comprising a cylinder in which a piston mounted on a shaft slides, and a biasing device operative to apply an urging force on said piston to drive said piston distally in said cylinder; and

a safety catch that initially prevents said biasing device from moving said piston, said safety catch being removable to permit said biasing device to move said piston, wherein said cylinder is at least partially filled with a hydraulic fluid, and wherein said piston is formed with a vent hole that passes through the thickness of said piston and is in fluid communication with a port in said shaft, wherein said vent hole and said port permit flow of said hydraulic fluid from a distal portion of said cylinder in front of said piston to a proximal portion of said cylinder behind said piston, and wherein a biasing force of said biasing device on said piston and a hydraulic damping of said hydraulic fluid provide a close-to-linear pumping force.

2-4. (cancelled)

5. (original) The syringe pump according to claim 1, wherein said driving mechanism is coupled to a head of said plunger with a clasp.

6. (original) The syringe pump according to claim 1, wherein said biasing device comprises a coil spring disposed on a portion of said shaft.

7. (original) The syringe pump according to claim 1, wherein said syringe contains sperm therein.

8. (original) The syringe pump according to claim 1, wherein said syringe and said driving mechanism are housed in a casing.

9. (original) The syringe pump according to claim 8, wherein said casing has a window through which travel of said driving mechanism is observable.

10. (new) A syringe pump comprising:

a syringe comprising a plunger that slides in a body which has a discharge port, said syringe containing sperm therein;

a driving mechanism, coupled to a head of said plunger with a clasp, comprising a cylinder in which a piston mounted on a shaft slides, and a biasing device operative to apply an urging force on said piston to drive said piston distally in said cylinder, said biasing device comprising a coil spring disposed on a portion of said shaft; and

a safety catch that initially prevents said biasing device from moving said piston, said safety catch being removable to permit said biasing device to move said piston;

wherein said cylinder is at least partially filled with a hydraulic fluid, and said piston is formed with a vent hole that passes through the thickness of said piston and is in fluid communication with a port in said shaft, wherein said vent hole and said port permit flow of said hydraulic fluid from a distal portion of said cylinder in front of said piston to a proximal portion of said cylinder behind said piston;

wherein a biasing force of said biasing device on said piston and a hydraulic damping of said hydraulic fluid provide a close-to-linear pumping force; and

wherein said syringe and said driving mechanism are housed in a casing that has a window through which travel of said driving mechanism is observable.